ABSTRACT OF THE DISCLOSURE

Methods are disclosed for sterilizing heart valves to reduce the level of one or more active biological contaminants or pathogens therein, such as viruses, bacteria, (including interand intracellular bacteria, such as mycoplasmas, ureaplasmas, nanobacteria, chlamydia, rickettsias), yeasts, molds, fungi, prions or similar agents responsible, alone or in combination, for TSEs and/or single or multicellular parasites. The methods involve sterilizing one or more heart valves with irradiation.